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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|--------------------------|------------------------|
| 10/588,381 | 05/11/2007 | Gerrit Wolk | 016906-0536 | 8420 |
| 52420 7590 09/16/2009 BACHMAN & LAPOINTE, P.C. (B) 900 CHAPEL STREET, SUITE 1201 NEW HAVEN, CT 06510-2602 | | | EXAMINER DUONG, THO V | |
| | | | ART UNIT 3744 | PAPER NUMBER |
| | | | MAIL DATE 09/16/2009 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/588,381 | WOLK, GERRIT | |
| | Examiner | Art Unit | |
| | Tho v. Duong | 3744 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/1/09</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Applicant's amendment filed 6/30/09 is acknowledged. Claims 1-14 are pending.

Response to Arguments

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7,9,10, and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hu (US 2004/0216863A1). Hu discloses (figures 1,9-10 and paragraph 62) a device for the heat exchange of heat comprising a heat exchanger having a plurality of flat tubes (28,30) arranged on two levels, having a plurality of internal channel connected to one collection and distribution device (12); the flat tube exhibits a linear course over the entire length of the tube; the tube has a width of 5 mm, a length of 200mm and a depth of 1.5 mm; the flat tubes are oriented at 90 degrees with the collection or distribution tank and brazed or welded to the tank ; a plurality of ribs (34) disposed between the tubes.

Claim Rejections - 35 USC § 103

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hu in view of Baba (US 5,628,206). Hu substantially discloses all of applicant's claimed invention as discussed above except for the limitation of a compressor, an expansion valve and an evaporator. Baba discloses (figure 2) a condenser is equipped in a system that includes a compressor (2); an evaporator (6) and an expansion valve (5) for a purpose of forming a refrigerating air conditioner device, that is capable of providing conditioned air to a vehicle. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Baba's teaching in Hu's device for a purpose of forming a refrigerating air conditioner device, that is capable of providing conditioned air to a vehicle.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hu in view of Kamiya et al. (US 5,307,870). Hu substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the internal diameter of the collection/ distribution tank is approximately equal to the long side of the flat tubular cross section of the flat tube. Kamiya discloses (figure 2) a heat exchanger that has the internal diameter of the collection/distribution tank is approximately equal to the long side of the flat tube for a purpose of forming a compact heat exchanger while exhibiting high pressure resistance. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use

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Kamiya's teaching in Hu's device for a purpose of forming a compact heat exchange while exhibiting high pressure resistance.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hu in view of Lee (US 2003/0066633A1). Hu substantially discloses all of applicant's claimed invention as discussed above except for the limitation that the heat exchanger contains a medium under a pressure of approximately 125 bar. Lee discloses (paragraphs 5-6 and 108) a condenser that uses carbon dioxide as a working fluid, which has pressure operating at between 100 through 130 bar for a purpose of improving the efficiency cooling cycle of the condenser. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Lee's teaching in Hu's device for a purpose of improving the efficiency cooling cycle of the condenser.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tho v. Duong whose telephone number is 571-272-4793. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tyler J. Cheryl can be reached on 571-272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tho v Duong/
Primary Examiner, Art Unit 3744